Replacing Automobile Level of Service for Better Health and Environmental Quality:

A Public Health Perspective

Working Research Paper

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SFdph.org/phes/publications/Transportation/TR Replacing Auto LOSA CEQA.pdf

Summary

Three arguments suggest that Automobile Level of Service is not an effective measure for protecting environmental quality:

First, Automobile Level of Service (LOS) measures the relative convenience and speed of travel for motor vehicle users and, as such, is an indicator of a social effect. In addition, LOS privileges the interests of motor vehicle users over other users of streets such as pedestrians and bicyclists.

Second, mitigating impacts on LOS by increasing roadway capacity degrades environmental quality by indirectly increasing vehicle volume, consequently increasing air pollution and green house gas emissions.

Third, many projects and policies which benefit the environment will have adverse effect based upon LOS analysis. Transportation projects such as bus-only lanes, bicycle lanes, and traffic safety improvements reduce driving and its environmental costs. Paradoxically, LOS analyses as currently performed often conclude that such projects result in adverse environment impacts.

In the context of environmental impact assessment (EIA) conducted under the California Environmental Quality Act, LOS does appropriately measure the value of projects that reduce demand for motor vehicle travel. LOS can be replaced in practice of EIA by using measures which capture changes in vehicle use and volume. Three readily available metrics that may serve to capture vehicle related environmental quality effects are Vehicle Miles Traveled, Mode Split, and Vehicle Trips Generated. Methods for evaluating transportation impacts need to be able to distinguish projects that reduce motor vehicle use (e.g., locally-oriented retail, infill housing) and those that increase it (e.g., regional retail, greenfield housing).

6. Recommendations for San Francisco Impact Assessment Procedures

1. Create an exemption from project-level LOS analysis for certain project types that decrease vehicle trips or vehicle miles and / or enhance transportation-related environmental quality, safety, and health goals:

Bicycle lanes that are part of with a citywide bicycle network
- Pedestrian improvements part of a citywide pedestrian network
- Bus lanes
- Urban rail projects
- Mixed-use or transit oriented developments that reduce traffic
Higher density residential construction

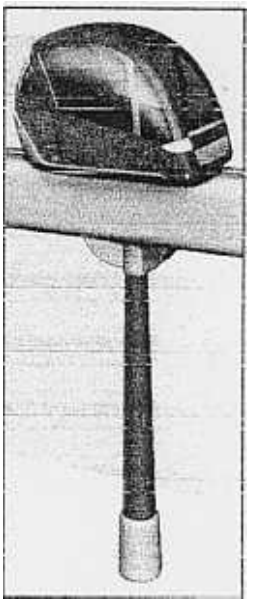
2. Continue LOS analysis pending a more suitable replacement indicator for projects that may generate net traffic trips or increase vehicle miles:

- Auto oriented retail uses
- Parking lots
Office uses

3. Evaluate the feasibility of replacing LOS analysis with transportation analysis using vehicle miles traveled or vehicle trips generated as the indicator. This indicator is already generated for LOS analysis. It will be important that methods distinguish projects that reduce local and regional vehicle trips from projects that generate them.

Silver Bullet Fact Sheet

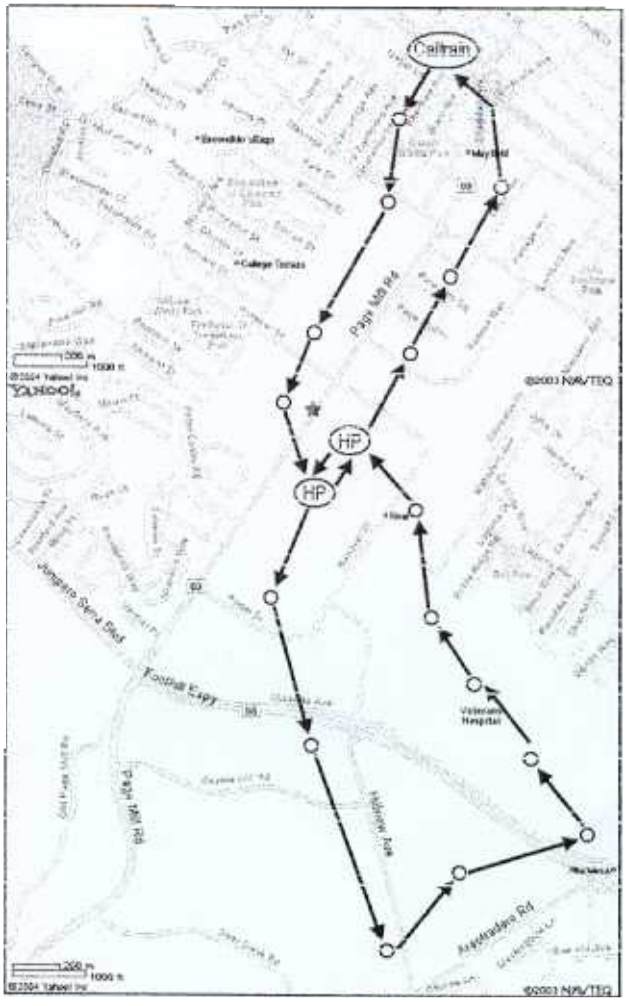
Personal Monorail for Palo Alto's Stanford Research Park



Recent national studies by the Texas Transportation Institute and the Brookings Institution conclude that there is no 'silver bullet' to reduce housing costs and traffic congestion. Cities21 disagrees. We have designed a real suburban silver bullet: less traffic and more housing at no taxpayer cost. Our design uses personal monorail and advanced cellphone technology to provide alternatives to driving alone and to reclaim parking spaces for better use.

Slash Suburban Solo Commuting!

A futuristic, five-mile, $50M Personal Rapid Transit (PRT) "shuttle" system is proposed for Palo Alto's Stanford Research Park (SRP), complementing and significantly increasing the attractiveness of commuter rail, carpool, vanpool, bicycle, and bus commutes for the center's 20,000 employees. The office park is transformed into a transit village of two square miles. PRT provides non-stop, no-wait, 30 mph service over the commute's "last mile," and services mid-day trips.



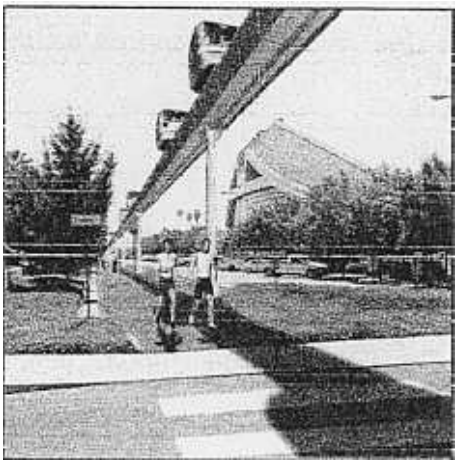
Our rigorous, large (thirteen researchers), three-year market research study shows a reduction in solo commuting from 89% to 45%. Extrapolating to the entire office park, 6,600 cars per day are removed, freeing 50 acres of parking for reclamation. Fare box, additional revenue, and cost savings total $16.9M per year, profitably covering PRT capital, operating, and maintenance costs. The model for Palo Alto readily translates to 200 other U.S. job-rich major employment centers.

100% Private-Sector Transit

Electric trolleys first came onto the scene in 1888. Cities granted "franchise agreements" to real-estate speculators who built and operated trolley systems. Within a few years, trolleys were the dominant mode of transit. A similar franchise agreement is proposed whereby Palo Alto will grant a franchise to a personal monorail operator. The franchisee will take on the investment risk, resulting in a system built with no taxpayer funds.

System Benefits: Less traffic, less greenhouse gas, more housing, more vibrant city, more auto-free mobility, improved public transit fare recovery, increased ability to attract employees, increased office and residential land values, increased retail sales, no taxpayer cost.

Personal Monorail – Personal Rapid Transit (PRT)



PRT is an elevated monorail system with many three-person, driverless, electric vehicles. It is ideally suited short "feeder/distributor", shuttle, and "circulation" operations at train stations, airports, office parks, and shopping centers. PRT provides non-stop, no-wait, 30 mph service.

Vehicles travel above ground on 16' elevated "guideway." Stations are located near building entrances. Many stations are situated along the route to minimize walking once the trip ends. Station guideway branches from the main guideway - vehicles turn off onto a separate track to pick up and drop off passengers. Because of these turn-offs, vehicles travel non-stop to the destination at 30 mph, bypassing intermediate stops and speeding at twice the average speed of autos on congested city streets below. PRT combines concepts from monorail (Disneyland), automated people movers (San Francisco Airport), roller coasters, and automated highway systems (Governor Schwarzenegger drives a van using GM OnStar "auto-pilot" in the science fiction movie The Sixth Day).

Passengers travel alone or with people of their choosing. Vehicle weight minimization greatly reduces the size of the elevated guideway and supporting columns, dramatically reducing construction cost and right of way acquisition. Vehicles flow along the guideway almost like data packets on the Internet, anticipating demand so that wait time is eliminated. In addition to improving commute alternatives, the PRT system eliminates mid-day stranding caused by many commute alternatives, by providing efficient transit to adjoining shops and restaurants.

PRT is an emerging technology under development in Minnesota (SkyWeb Express), Texas (Microrail), and the United Kingdom (ULTra – this firm has a Berkeley subsidiary). Though differing in design, all three efforts have one or more vehicles and a section of guideway completed. First commercial deployment will be in 2007, at the earliest.

Digital Mobility – Coordinating Your Transportation Needs

New mobility is a "new transportation approach that focuses on pairing clusters of smart technologies with existing transportation options to create a coordinated, intermodal transportation system that could substitute for the traditional auto." We combine web applications, phone support, and cellular location tracking applications (using GPS) into a comprehensive service to provide comprehensive door-to-door mobility.

About Cities21

Cities21 is a group of professionals working together for better transit, greater urban livability, and reduced pollution. Some elements we favor: transit villages, real-estate in-fill, workforce housing, automated transit, and wireless connection-making software. We help improve twenty-first century cities. www.cities21.org.

"Our current transportation policy path in the U. S. is clearly unsustainable. Traffic, its environmental impacts and its impact on quality of life continue to get worse virtually everywhere in the country. Innovative new ideas and new approaches are badly needed. We need a portfolio of innovative approaches spread across the United States, with each one pushing the envelope towards a more sustainable future transportation system. Cities21 and its Suburban Silver Bullet should be in this portfolio. It is innovative; it is forward-looking; it addresses many key transportation challenges; and the potential benefits - if widely disseminated - are large." - Steve Offutt, EPA's Best Workplaces for Commuters.

"I've long thought personal rapid transit would be a silver bullet for Edge City transportation woes if you could keep it as simple, customizable, scalable, affordable, and profitable as Legos. Cities21 may have cracked the code." - Joel Garreau, *Edge City: Life on the New Frontier.*

"I am especially impressed with the Cities21 comprehensive approach to implementing an innovative transportation system. I think it represents a model that should be emulated by others around the country who wish to participate in our needed transportation revolution. More and more cars, however green, are not the answer we need to ward off a growing dependency on foreign oil and to help limit, perhaps reverse somewhat, the degradation that has been imposed on our cities by the automobile. We can do much better but we have to form large coalitions of like-minded people in order to overcome the tremendous vested interests that wish only to maintain the status quo. Cities21 has shown us how this can be done. One can hope it will be emulated across the land." - Jerry Schneider, Professor Emeritus, University of Washington.

Palo Alto Bicycles

Source for cycling information

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Palo Alto, CA 94301
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Home

About Palo Alto Bicycles

Directions to Store

Site Directory

News, Events, & Clinic Schedule

Bikes We Sell

Accessories and Clothing

Parts and Components

Service Department

Bike Rentals

Women's Race Team

Racing News

Bikestation/Commuter Services

Virtual Tour of the Alps

Email Us

Palo Alto Bicycles manages Bikestation at Caltrain Depot

Palo Alto Bicycles, in cooperation with the City of Palo Alto and Caltrain, operates Northern California's first bicycle commuter station. The project is funded by the City of Palo Alto and a grant from the Bay Area Air Quality Management.

The old baggage building at the depot has been converted into a staffed bicycle parking facility for bicycle commuters. It works like a coat check: you can leave your bike while you commute on the train or bus or while visiting Palo Alto. There is no charge for bicycle parking. The facility is open weekdays from 7:00 AM to 7:00 PM, and on weekends from 10:00 AM to 5:00 PM.

In addition to the parking facility there is a mechanic on duty to perform repairs and adjustments. Palo Alto Bicycles also operates a retail store at the depot where commuters can purchase ride necessities such as tubes, patch kits, reflective wear, lights, and a variety of other bicycle accessories.

It is easy to get off the train and rent a mountain or road bicycle. Then you can travel around the city or tour the surrounding miles of popular roads and trails.

BIKESTATION PALO ALTO

Project Overview

The Bikestation is a full-service transit center designed to encourage the use of bicycles and public transportation. The Palo Alto Caltrain depot is a central hub for the Caltrain commuter train line, SamTrans bus lines, Valley Transportation Authority (VTA) bus lines, Dumbarton Express, as well as Stanford University's Marguerite shuttle. Palo Alto has one of California's first bicycle boulevards and a network of local streets that give both space and priority to bicycles.

The concept is modeled after the Long Beach Bikestation in Southern California and on thousands of successful European and Japanese bike facilities that operate today. Palo Alto's Bikestation is only the third facility of its kind to operate in the United States.

Benefits

With the support of commuter bike facilities which feed into existing transportation systems, the bicycle can provide urban areas with unique opportunities to become more livable. Bicycle commuting provides better air quality, reduction of vehicular congestion on streets and in parking structures, and offers convenient, economical and healthful alternatives to residents and transit commuters.

Architecture and Design

The Palo Alto train depot is on the National Historic Register and is a cornerstone building in downtown Palo Alto. The Bikestation facility is located on the north side of the depot on the platform adjacent to the bus loading/unloading area. The Bikestation brings meaning to the term "intermodal transportation" providing Palo Alto with one of the best examples in the country.

Further information

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For more information about the Bikestation concept visit: www.bikestation.org

Services

24 hour secure bicycle parking
Clean showers and lockers
Free use of bicycle sharing program
10% off bicycle repairs and retail items
And Much More!

Join Now, It's Easy

Why should your company promote bicycle commuting?

- Economics
- Productivity
- Company Morale
- Corporate Image

Chicago Bicycle Map

Millennium Park Bicycle Station offers the following services:

The bicycle station offers 300 secure bicycle parking spaces.

During the summer performances at Millennium Park and the festivals at Grant Park valet bicycle parking will be available. This service is free! Take advantage of it and ride your bike to the festivals.

To make your bicycle commute comfortable we provide lockers and showers so you may refresh before you go to work. Click Memberships for details.

Bikes are available for rent by the hour, day, or week. Click Rentals for more details.

Professional bicycle mechanics are available full time at the bicycle station during the summer from 10am to 6pm and part time during the winter.

Memorial Day to Labor Day, guided bicycle tours are offered daily at 10:00Am and 1:00PM. Click Tours for more details.

June-August, Ages 9-14. Join us for a 2 hour lakefront fun ride. Call **888-BIKE-WAY** for details.

IGO cars are available for rent from Millennium Park. IGO is a non for profit car sharing program, developed by the Center. Visit: www.i-go-cars.org

The Coffee Bar with outdoor seating is open May through September.

Free internet kiosk is available to send a quick email or register your bike with the Chicago Police Department.

If your city or company would like to open a Bicycle Station, we would love to help. Please call us at: **888-BIKE-WAY**.